



STATE OF WASHINGTON

DEPARTMENT OF AGRICULTURE

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Swine Diseases of Concern at Fairs and Exhibitions

From the State Veterinarian

Fair Managers and Swine Department Superintendents

Please read this important information about several diseases of concern and share with swine exhibitors in advance of upcoming fairs and exhibitions. These diseases are highly contagious and can spread readily where animals congregate. Please closely check the health of animals at entry and during exhibition. Encourage exhibitors to continue monitoring their animals for signs of illness after the event and instruct them to contact their veterinarian and fair management if their animals show signs of illness after returning home. Maintain exhibitor records after your events so exhibitors can be contacted easily in the event of a disease outbreak. Thank you for doing your part to safeguard the health of swine in Washington State.

Introduction

Several contagious diseases can spread wherever swine gather. These include swine influenza, atrophic rhinitis, porcine epidemic diarrhea and many more. Animals transported to shows, breeding farms, or other settings where animals from various farms have contact with each other are at increased risk of illness. A Certificate of Veterinary Inspection (CVI) is required for swine traveling interstate for shows and exhibitions. A CVI indicates the animal has been examined and appears healthy, which helps reduce spread of highly contagious diseases. Table 1 lists the causes, means of transmission, signs of illness, prevention methods, zoonotic potential, and relevance to fairs for five diseases of most concern.

Animal identification requirements

To assist with tracking animals in the event of a disease outbreak, swine moved interstate must be officially identified and accompanied by a CVI. For swine, official identification methods include:

- Official ear tags (see https://www.aphis.usda.gov/traceability/downloads/ADT_eartags_criteria.pdf)
- USDA back tags **only** when used on swine moving in slaughter channels.
- Official swine tattoos (issued and authorized by state or federal animal health officials) on swine moving in slaughter channels.
- Ear notching, if recorded in the book of record of a purebred registry association.
- Tattoos on the ear or inner flank of any swine, if recorded in the book of record of a swine registry association.
- For slaughter swine and feeder swine, an ear tag or tattoo bearing the premises identification number (PIN) assigned by the state animal health official to the premises on which the swine originated.

Biosecurity measures for fair managers

1. Do not let animals with questionable health enter a fair or exhibition.
2. Whenever possible, use metal vs. wood for animal stalls to enable better disinfection.
3. Discourage exhibitors from going in and out of others' pens, sharing clippers or other equipment, or contacting others' animals.
4. Encourage appropriate pre-event vaccinations for diseases of concern; consult with a veterinarian for guidance regarding vaccinations.
5. Provide/encourage use of handwashing stations and hand sanitizers by exhibitors and the public.
6. Monitor animal health throughout the event.
7. Contact a veterinarian if animal health concerns arise.
8. Establish an isolation area for animal disease suspect cases.
9. Thoroughly clean and disinfect all surfaces before and after an event.
10. Do not house young weaned animals with adult animals.
11. Show exhibitors how to fill water buckets with communal hoses without contaminating buckets.
12. Provide solid-sided pen partitions unless ventilation will be compromised.
13. Discourage nose-to-nose contact between animals from different farms.
14. Keep at least 10' between market and breeding animals.
15. Have exhibitors provide their own feed and water buckets for each pen.
16. Ensure effective amount and direction of ventilation.
17. Discourage the public from touching exhibited animals.
18. Do not allow eating, drinking, smoking, strollers, or pacifiers in barns.
19. Control wild birds, flies, and rodents as much as possible.
20. Maintain exhibitor records to be able to communicate about post-event outbreaks with exhibitors.
21. Clean and disinfect communal wash racks between animals.
22. Do not allow contact between exhibited swine and poultry, nor allow exhibitors to exhibit both poultry and swine.
23. If sprinkler systems are used to keep swine cool, use systems that deliver large drops of water for a brief period, then shut off and allow the water to evaporate so swine can dissipate body heat. Avoid misting systems that increase humidity and make the environment wet, which can promote disease transmission.

Additional recommendations to reduce swine influenza risks

- Limit the time pigs are congregated, co-mingled, and held at an exhibition. Exhibited swine should not be kept on exhibition grounds longer than 72 hours.
- Consider only having terminal (market) swine classes and no breeding classes.
- Discourage "holdover pigs" held on exhibition grounds and exhibited at additional shows.
- Release pigs from exhibition grounds as soon as possible following their respective show(s).
- If offering both terminal (market) and breeding swine shows, schedule the terminal show after the breeding swine show or schedule a break between shows. Use this break to clean and disinfect the facility. If this cannot be done, separate market swine from breeding swine as stringently as possible.
- Locate longer-term swine exhibits (i.e., big boars, birthing center animals, rare breeds, display exhibits of pigs) away from where competition swine are housed.
- Clean and disinfect gates, chutes, sort panels, and any equipment used during weighing and identification procedures.
- Establish a relationship with a veterinarian who will be present or on call for the duration of the exhibition. The veterinarian will be responsible for monitoring animals for signs of illness, evaluating sick

animals, and taking steps as warranted to ensure ill swine are removed from the exhibition area and isolated or sent home and treated.

- Establish a protocol to remove sick swine from the exhibition area immediately.
- Become familiar with clinical signs of influenza and other pig illnesses (off feed, lethargic, fever, nasal discharge, discolored skin, lameness, mouth or nose blisters, diarrhea, cough, sneezing, etc.).
- Seek veterinary assistance if a pig becomes sick at an exhibition.
- Understand the risks to both humans and animals of taking a sick pig to a show. Sick pigs and sick people need to stay home so they do not risk infecting other pigs or people.
- House poultry and waterfowl exhibits well away from swine exhibits and do not allow poultry in swine facilities.
- To reduce the risk of development of a hybrid avian or swine influenza virus highly contagious and highly pathogenic to humans, discourage exhibitors from exhibiting and/or handling poultry and swine at the same exhibition.
- Recommend exhibitors provide at least seven days of “down time” (on-farm quarantine) after returning from a previous exhibition before taking a pig or its pen mates to another exhibition to reduce the risk of spreading influenza or other diseases. A 30 day on-farm quarantine of returning exhibition animals is preferred.

Effective cleaning and disinfection steps

Thorough cleaning and disinfection are important steps to reduce the risk of infectious diseases. A veterinarian can help select the most appropriate disinfectant. Follow these steps for effective disinfection:

1. Remove all visible debris (manure, bedding, dirt, feed, etc.).
2. Thoroughly clean all surfaces with soap and water.
3. Rinse well and let dry.
4. Apply an appropriate disinfectant at the right concentration for the required contact time.
5. Rinse and let dry before using equipment or restocking premises with animals.

What to do if a swine disease outbreak occurs at a show

- Contact your local veterinarian, or the state veterinarian at 360-902-1878. To protect animal health and control the outbreak, a decision may be made to isolate animals at the fairgrounds.
- After emptying infected barns, remove manure and bedding from stalls and compost on site if possible. Clean and disinfect all surfaces thoroughly using a disinfectant recommended by a veterinarian.
- Notify all exhibitors who visited the premise in the 14 days before an outbreak that an outbreak has occurred and they should contact their veterinarian for guidance.

Conclusion

The diseases mentioned in this publication (there are many more) are highly contagious and can cause severe illness and even death; some are even contagious to humans. Prevention steps include enacting effective biosecurity steps daily, monitoring animals closely for signs of illness, possible preventative vaccinations, and close contact with knowledgeable veterinarians. Show animals are at even greater risk of infection due to increased stress and pathogen exposure, so fair managers and superintendents must keep these and other contagious diseases in mind when managing exhibitions.

If you have questions about swine health in Washington State, contact the state veterinarian at 360-902-1878 or ahhealth@agr.wa.gov or your local veterinarian.

Additional Resources

<https://agr.wa.gov/departments/animals-livestock-and-pets/animal-health>

www.cfsph.iastate.edu/Disinfection/index.php

<http://www.cfsph.iastate.edu/Species/swine.php>

https://www.aphis.usda.gov/traceability/downloads/ADT_eartags_criteria.pdf

<https://thepigsite.com/disease-guide>

www.porkgateway.org

<https://www.swinehealth.org>

<https://www.cdc.gov/flu/pdf/swineflu/influenza-transmission-swine-exhibitions-2014.pdf>

www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/swine-disease-information

**Revised Code of Washington
(RCW) 16.36.082: Infected or exposed animals—Unlawful to transfer or expose other animals.**

It is unlawful for any person with an animal having any contagious, communicable, or infectious disease to knowingly stable the animal or allow the animal to be stabled in any barn with other animals without notifying the other owners.

CRITICAL ADVICE FOR EXHIBITORS

- Only take healthy animals to shows or fairs.
- Quarantine new or returning animals from home herd for 30 days; take temperature twice daily and monitor for signs of illness.
- Perform home herd chores first. Use separate equipment, footwear, and clothing for quarantined animals. Wash hands after handling each animal.
- Isolate sick animals and contact a veterinarian about them.
- Clean and disinfect equipment.
- Vaccinate for relevant diseases.
- Minimize stress for animals at home or away.
- Provide excellent nutrition at all times.
- Emphasize sanitation and keep premises clean.
- For swine, consider only participating in terminal market livestock shows.

Table 1. Comparison of the disease characteristics of atrophic rhinitis, erysipelas, porcine epidemic diarrhea, swine influenza, and vesicular diseases of swine.

	Atrophic rhinitis	Erysipelas	PED	Swine influenza	Vesicular diseases
Cause	One or both of two bacteria, <i>Bordetella bronchiseptica</i> and <i>Pasteurella multocida</i> type A or D toxins	<i>Erysipelothrix rhusiopathiae</i> bacterium	Porcine epidemic diarrhea virus	Influenza virus type A	<ul style="list-style-type: none"> • Foot and mouth disease virus • Seneca valley virus • Vesicular stomatitis virus • Swine vesicular disease virus • Vesicular exanthema of swine virus
Transmission	Direct or indirect contact with carrier animals or their discharges	Oral intake via feed or water contaminated with infected feces	Oral intake via feed or water contaminated with infected feces; contact with surfaces contaminated with infected feces	Pig-to-pig contact and aerosolized virus. Contact with infected surfaces. Carrier animals	Aerosolized virus, direct/indirect contact with infective discharges, ingestion, fomites, insects, ingestion of contaminated undercooked meat
Signs	Reduced weight gain and feed efficiency, distorted snout, secondary pneumonia, sneezing or snuffling, +/- bloody nasal discharge	High fever, poor appetite, lameness, swollen joints, abortion, red or black diamond-shaped skin lesions, infertility, death	Severe diarrhea and vomiting; high death rate in young pigs	Fever, poor appetite, depression, coughing, difficulty breathing, eye/nose discharge, weakness. Rapid herd spread and recovery. Low death rate	Lameness, fever, poor appetite, salivation, hoof sloughing, possible nervous system signs. Vesicles/blisters/ulcers/erosions on snout, oral tissues, teats/mammary glands, hoof coronary bands and/or between toes
Prevention	<ul style="list-style-type: none"> • Vaccinate • Purchase pigs from herds that are known negative sources. • Monitor each animal's snout regularly; this is especially important for sows • Use all in, all out housing management • Empty housing unit periodically; clean and disinfect thoroughly • Do not crowd pigs • Ensure effective ventilation in all facilities, paying attention to 	<ul style="list-style-type: none"> • Vaccinate • Ensure excellent sanitation • Control birds and vermin • Use all in, all out housing management • Thoroughly clean and disinfect facilities 	<ul style="list-style-type: none"> • Enact strict biosecurity and sanitation measures • Control visitors and vehicular traffic • Control vermin, birds, and insects • Vaccinate • Establish a line of separation to delineate "clean" and "dirty" areas of the farm to control vehicular and foot traffic 	<ul style="list-style-type: none"> • Ensure effective ventilation in all facilities, paying attention to where intake and outflow vents are located • Reduce stress by not overcrowding, controlling environmental temperature, preventing drafts, and not 	<ul style="list-style-type: none"> • Stay current on local and national disease situations • Enact strict biosecurity and sanitation measures • Control insects • Ensure effective ventilation in all facilities, paying attention to where intake and outflow vents are located • Establish a line of separation to delineate "clean" and "dirty" areas of the farm to control vehicular and foot

	<p>where intake and outflow vents are located</p> <ul style="list-style-type: none"> • Keep facilities dry with low humidity • Have solid partitions between pens • Regulate environmental temperature as much as possible • Cull animals with clinical signs • Keep weaned animals away from older animals • Do not allow fair exhibitors with non-terminal animals to handle each other's animals, share equipment, exchange clothing or footwear, etc. 	<ul style="list-style-type: none"> • Minimize transportation and stress • Avoid sudden feed changes • Control environmental temperature • Keep environment dry • Control internal parasites 	<ul style="list-style-type: none"> • Clean facilities, equipment, vehicles, footwear, etc. and apply an effective disinfectant following label directions 	<p>mixing animals between groups</p> <ul style="list-style-type: none"> • Keep housing and bedding dry • Prevent dusty conditions and ammonia fume accumulation • Monitor animals for signs of illness; isolate any appearing ill • Use AI vs. boars • Keep herds closed • Provide good nutrition • Vaccinate 	<p>traffic</p> <ul style="list-style-type: none"> • Clean facilities, equipment, vehicles, footwear, etc. and apply an effective disinfectant following label directions • Keep herds closed • Monitor animals for signs of illness; isolate any appearing ill • Contact local or state veterinarian immediately if animals with fever and oral/feet lesions are found
Relevance to fairs	Transmission is a concern in breeding animals with nose-to-nose contact at a fair	Signs of illness visible to public; potential for transmission to humans	Highly contagious virus; disease risk increased with swine transportation, stress, and mixing from multiple premises	People have contracted swine flu from close contact with pigs at fairs. Prevent swine and poultry contact.	Highly contagious diseases, some of which can infect multiple livestock species
Human health concern?	No	Yes	No	Yes	Low
Notes	Presence in closed and commercial herds greatly reduced in recent years due to vaccination; risk higher in smaller-scale and open operations.	Very common in soil and carrier pigs.	Much less deadly in older animals. Immunity from infection is not long lasting. Vaccine effectiveness is questionable and its use is not yet widespread.	Prevent sick pigs, poultry, and people from entering fair grounds to lessen the chance of development of an influenza virus mutation that is highly contagious and deadly to people.	Some of these diseases are foreign to the U.S. and of great concern. They all have similar signs, so prompt recognition of oral and/or foot ulcers and notification of veterinarians is critical.